

REMARKS

The Applicant has terminated the services of the former attorney of record and has retained the services of the undersigned attorney. Applicant is submitting herewith a "Revocation of Power Attorney With New Power of Attorney And Change of Correspondence Address". The undersigned attorney respectfully requests that the Examiner call the undersigned attorney prior to substantively reviewing this amendment so that the undersigned may briefly discuss the nature and purpose of this amendment.

In the Office Action, the Examiner has objected to Figure 1 of the drawings since it was missing the legend "Prior Art". The Examiner has rejected claim 3 under 35 USC 112, second paragraph, for the reasons stated in the Office Action. The Examiner has rejected claim 1-5 and 7-9 under 35 USC 102(b) as being anticipated by Halling U.S. Patent No. 4,457,523 ("Halling"). The Examiner has rejected claim 6 under 35 USC 103(a) as being unpatentable over Halling in view of Spence et al. Patent Application Publication No. US 2003/0107188 ("Spence").

Applicant has cancelled claims 1-9 thereby rendering moot any rejections directed to those claims.

Applicant has submitted a new set of claims, amendments to the specification, amendments to the drawings and an amendment to the abstract. All of these amendments are supported either

explicitly or inherently by the originally filed specification, claims, abstract and drawings. Applicant will now discuss in detail the amendments to these parts of the instant application.

1) Amendments to the Drawings

Applicant has deleted the originally filed Figure 1 and has added new Figures 1A and 1B which show the prior art axial c-seal which is described in the originally filed specification at page 2, lines 11-14, and page 4, line 12.

Applicant has added new drawing sheets containing Figures 2A, 2B, 2C, 2E, 2F and 2G. Figure 2A is a plan view and Figure 2B is a side view, in longitudinal section, taken along line 2B-2B in Figure 2A. The view in Figure 2B is similar to the view shown in originally filed Figure 3. Figure 2C is simply an enlarged view of a portion of the view shown in Figure 2B. Figure 2D is the originally filed Figure 2, however, cross-hatching has been added since this view is a cross-sectional view. (The view shown in originally filed Figure 2 was described as a cross-sectional view in the originally filed specification, page 4, lines 5-6). Figure 2E is another plan view of the seal of the present invention and Figure 2F is a side view, in longitudinal section, taken along line 2F-2F in Figure 2E. Figure 2G is an enlarged view of a portion of the view shown in Figure 2F.

## 2) Amendments to the Specification

Applicant has also added language to the Summary of the Invention that is the same as the language in new independent claims 10, 17, 23 and 30. This new language clarifies what is being claimed as the invention in this application. For the reasons explained in the ensuing remarks, the text added to the Summary of the Invention does not constitute new matter.

Applicant has amended the portion of the instant specification entitled "Brief Description of the Drawings" to add description pertaining to the new or replacement drawing figures described in the foregoing remarks. This portion of the specification was also amended to cure grammar errors and to eliminate awkwardly written phrases.

Applicant has amended the instant specification to cure many grammar errors and to rewrite portions of the specification so as to enhance readability. For example, a significant number of the amendments comprised rewriting or amending sentences that were awkwardly written. The purpose of such amendments will be obvious upon comparing the original text to the amended text.

## 3) Amendment to the Abstract

Applicant has amended the Abstract to recite the language that is found in new claim 10. For reasons explained in the ensuing remarks, the new Abstract does not constitute new matter.

#### 4) Amendments to the Claims

Prior to this amendment, claims 1-9 were pending in this application. Applicant has cancelled claims 1-9 thereby rendering moot any rejections directed to these claims.

Applicant has added new claims 10-30. Applicant submits that these new claims clearly define the claimed invention. Although these claims use different language, these claims do not introduce new matter and are fully supported by the specification. The Federal Circuit has stated that "although the exact terms need not be used in *haec verba*,...the specification must contain an equivalent description of the claimed subject matter." (see Lockwood v. American Airlines, Inc., 41 USPQ2d 1961 (Fed. Cir. 1997)). As is apparent from comparing the claim language in new claims 10-30 to the disclosure of the instant specification and originally filed drawings, it is clear that that the instant specification contains an equivalent description of the claimed subject matter.

The Examiner has cited Halling U.S. Patent No. 4,457,523 (the "'523 patent"). Specifically, the Examiner has referred to the seal shown in FIG. 6 of the '523 patent. As shown in FIG. 6 of the '523 patent, sealing ring 12' comprises a central tapering portion 42' having first and second ends 43' and 44', a first sealing portion 46' extending from the first end 43' and a second sealing portion 47' extending from the

second end 44'. Each sealing portion 46' and 47' is curvilinear in cross-section wherein the cross-section is arcuate and substantially semi-circular. As shown in FIG. 6, the overall cross-section of sealing ring 12', including the two sealing portions 46' and 47' and the central portion 42', is substantially C-shaped. On the other hand, the structure of the annular seal of the present invention is significantly different than the seal shown in FIG. 6 of the '523 patent. These differences are now described in the ensuing remarks and in the Declaration of Horace P. Halling Under Rule 132 ("Halling Declaration").

The Examiner is now referred to new claim 10 and the Halling Declaration. Mr. Halling, the inventor of the present invention, has clearly described the structure of the seal of claim 10 and makes reference to a drawing labeled as Exhibit B in the aforesaid Declaration. The Examiner is urged to refer to Exhibit B when reviewing the ensuing remarks. Each portion of the seal in the drawing labeled Exhibit B is labeled in accordance with the terms and elements recited in claim 10. Claim 10 recites an annular seal member ("seal") that has a generally "j" shaped cross-section. This is supported by the instant specification on page 4, line 7, and in originally filed drawings Figures 2, 4, 5, 6 and 7 of the present application. Claim 10 further recites that the seal has a first end portion which has a

first distal end, a generally curled second end portion that extends to a second distal end, and a central body portion between and contiguous with the first and second end portions. The central body portion has a generally frustro-conical shape. The seal has a first side and an opposite second side. The second end portion curls in a first direction in accordance with a predetermined radius such that the second distal end is located across from the first side of the annular seal member and the first and second distal ends do not face each other. The portion of the first end portion having the first distal end, indicated by the letter "A", is slightly angulated in the first direction. The first and second distal ends do not face each other. The slight angulation of portion "A" facilitates assembly of a sliding member, such as a probe, into the seal. The slight angulation of portion "A" provides for a relatively smaller second moment of area. Thus, the force required to dilate the opening of the seal of the present invention is considerably reduced in comparison to an end portion having a significantly large curl as does end portion 43' of sealing ring 12' shown in FIG. 6 of the '523 patent. A resulting advantage of the particular shape of the seal of the present invention, and its end portion "A", is that it minimizes wear in dynamic applications or repeated insertions. The '523 patent clearly does not disclose the particular structure of

the annular seal of new claim 10. The Halling Declaration also explains the differences between the claimed annular seal and the other seal embodiments disclosed in the '523 patent, and the advantages of the particular structure of the seal of claim 10. Therefore, Applicant submits that the '523 patent does not anticipate the seal claimed in independent claim 10. Spence Patent Application Publication No. US 2003/0107188 ("Spence") discloses metallic seal 10 which has first annular end section 31, a second annular end section 32 and a third annular center section 33. The first and second annular end sections 31 and 32 have curved cross-sectional profiles, while the third annular section 33 has a straight cross-sectional profile. The annular sections 31, 32 and 33 are configured to form a somewhat S-shaped cross-section. The S-shaped cross-section is preferably uniform along the entire circumference of the metal seal 10 (see Spence, paragraph 0036). Thus, the particular metallic seal 10 disclosed in Spence has a totally different structure than the seal of claim 10 of the present application. (see Halling Declaration Under Rule 132, par. 11). Therefore, Applicant submits that neither the '523 patent nor Spence renders obvious the annular seal member recited in claim 10. Claim 17 recites an annular seal member having generally the same structural elements and limitations as recited in claim 10. Thus, although claim 17 is different in scope than claim

10, Applicant submits that the '523 patent does not anticipate new independent claim 17 for the same reasons mentioned in the foregoing remarks. Furthermore, Applicant submits that the '523 patent and Spence, either taken alone or in combination, do not render obvious the claimed seal of claim 17.

New independent claim 23 recites that the annular seal member of the present invention has a generally hook-shaped cross-section. This is supported by originally filed drawings labelled as FIGS. 2-7. In addition to the hook-shaped cross-section, this claim also recites generally the same structural limitations and elements as recited in new independent claims 10 and 17. Therefore, Applicant submits that the '523 patent does not anticipate the annular seal member recited in new independent claim 23 and that, the '523 patent and Spence do not render obvious the annular seal member recited in new independent claim 23.

New independent claim 30 recites an "annular metallic seal" that has generally the same structural limitations and elements recited in new claim 17. Claim 30 further recites that the generally frusto-conical central body portion has a thickness that "tapers in the direction of said first end." Support for this limitation is shown in originally filed Figures 3, 5 and 6, the instant specification at page 6, lines 7-10, and originally filed claim 6. The '523 patent



and Spence do not disclose, teach or suggest an annular metallic seal having the particular structure recited in claim 30. Therefore, Applicant submits that that the '523 patent does not anticipate the annular seal recited in new independent claim 30 and that the '523 patent and Spence do not render obvious the annular seal recited in new independent claim 30.

Since it has been shown that independent claims 10, 17, 23 and 30 are patentable over the cited references, Applicant submits that dependent claims 11-16, 18-22 and 24-29 are also patentable over the cited references.

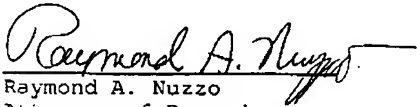
Applicant submits that the present application is now in condition for allowance. Reconsideration and allowance of this application are therefore earnestly solicited.

Applicant is enclosing herewith the fee to cover the addition of the extra independent claim. Applicant is also enclosing herewith a Petition for Extension of Time for one month and the appropriate fee.

Respectfully submitted,

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